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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/876,038	06/08/2001	Charles G. Butts	114300-1762	7429

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EXAMINER
LAU, TUNG S

ART UNIT	PAPER NUMBER
2863	

DATE MAILED: 04/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/876,038	BUTTS ET AL.	
	Examiner	Art Unit	
	Tung S Lau	2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *4-21-2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 8 ,13 , 2, 9, 10, 14, 15, 16 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Kanai (U.S. Patent 5,824,921).

Regarding claim 1:

Kanai discloses a test system for simultaneously testing a plurality of heat pumps, comprising: an array of testing stations (fig. 1), wherein each of said testing stations Includes at least one heating element [for attachment] attached to a first component of a heat pump and wherein each of said testing stations includes at least one sensor connected to a heat pump (col. 1, lines 35-65, col. 2, lines 27-59); a plurality of data acquisition lines each of said plurality of data acquisition lines connected to a separate sensor for each testing station (fig. 1, 6); a plurality of control lines each of said plurality of control lines connected to a second component of separate heat pumps; and a control device which receives test data through said data acquisition lines and transmits control data over said control lines (fig. 6).

Regarding claim 8:

Kanai discloses a test system for simultaneously testing a plurality of heat pumps, comprising: an array of testing stations (fig. 1, 6), wherein each of said testing stations includes at least one heating means [which can be] attached to a first component of a heat pump for providing a heat load to said heat pump and wherein each of said testing stations includes at least one sensor means coupled to a heat pump to generate test data (col. 1, lines 35-65, col. 10, lines 1-12); a plurality of data acquisition connection (fig. 4)means each of said plurality of data acquisition connection means connected to a separate sensor means for each testing station (fig. 6); a plurality of control connection means each of said plurality of control connection means connected to a second component of separate heat pumps (col. 1-2, lines 66-45); and a control means which receives test data through said data acquisition connection means and transmits control data over said control [lines] connection means (fig. 7-8, 15).

Regarding claim 13:

Kanai discloses a method of testing a plurality of heat pumps (fig. 1, 6), simultaneously comprising the steps of: providing a first control signal to a first component of a plurality of heat pumps to operate a function of said heat pumps; providing a second control signal to a plurality of heating [element] elements (col. 10, lines 1-12), said heating elements placing a head load on said heat pumps; receiving data from a plurality of sensors coupled to said heat pumps (fig. 6); and

comparing said received data to accepted performance parameters for said heat pumps (col. 1-2, lines35-59).

Regarding claims 2, 9, 10, 14, 15, 16 and 20:

The heat pump is evaporate coil and a compressor (col. 8-9, lines 66-5, col. 9, lines 31-40, fig. 2), use of temperature sensor, plurality control lines to separate heat pump station (fig. 1, 6, 10), running on a computer test station (fig. 1), pass fail results (fig. 19-25), plurality of valves of heat pump (col. 20, lines 16-25).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

a. Claims 3-7, 11,12,17,18 and 19 rejected under 35 U.S.C. 103(a) as being unpatentable over Kanai (U.S. Patent 5,824,921) in view of Marshall et al. (U.S. Patent 6,370,891).

Kanai discloses a method including the subject matter discussed above except the use of temperature sensors. Marshall discloses the use of temperature sensors (col. 3-4, lines 55-46), in order to provide sufficient verification test data (col. 2, lines 15-28).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kanai to have the use of temperature sensors taught by Marshall in order to provide sufficient verification test data (col. 2, lines 15-28).

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung S Lau whose telephone number is 703-305-3309. The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on 703-308-3126. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-5841 for regular communications and 703-308-5841 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

TC2800 RightFAX Telephone Numbers : TC2800 Official Before-Final RightFAX - (703) 872-9318, TC2800 Official After-Final RightFAX - (703) 872-9319

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